

FACT SHEET FOR NPDES PERMIT WA-003150-0
FACILITY NAME: WDFW BELLINGHAM HATCHERY

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has authorized the State of Washington to administer the NPDES permit program. Chapter 90.48 RCW defines the Department of Ecology's authority and obligations in administering the Wastewater Discharge Permit Program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the public notice procedures).

| GENERAL INFORMATION | |
|---------------------------|---|
| Applicant | Washington State Department of Fish and Wildlife |
| Facility Name and Address | Bellingham Hatchery Whatcom Falls Park 1700 Silver Beach Road Bellingham, WA 98226 |
| Type of Facility | Fish Hatching and Rearing |
| SIC Code | 0921 |
| Discharge Location | Outfall #001 – Whatcom Creek Latitude: 48° 45' 13" N Longitude: 122° 25' 37" W Outfall #002 – Post Point Pollution Control Plant Latitude: 48° 43' 11" N Longitude: 122° 32' 22" W |
| Water Body Segment Number | WA-01-3110 WA-01-0080 |

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BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The Department of Fish and Wildlife (WDFW) has owned and operated this enhancement facility since the early 1930's. The 10 concrete circular ponds, 5 fiberglass round ponds, and a bank of 7 concrete raceways rear primarily steelhead and rainbow trout for release to lakes and streams as part of enhancement programs. In 1995, WDFW constructed a pipeline for cleaning wastes to discharge to the City of Bellingham Post Point Pollution Control Facility, because constructing an on-site pollution abatement/settling pond was not feasible.

INDUSTRIAL PROCESS

This facility hatches about 1.2 million eggs annually to produce up to 90,000 pounds of fry fingerlings and catchables each year. There are no fish released directly to Whatcom Creek from this facility. Fish are removed from the ponds by a vacuum pump, placed in fish holding tanks, and trucked to the release sites in Whatcom, Skagit, Island, and San Juan Counties.

Fish are fed daily with pelletized food to promote growth.

Disease control chemicals are stored on-site in a covered and contained facility.

DISCHARGE OUTFALL

Outfall #001 is defined as the discharge pipe for the pond and raceway flow-through water, into Whatcom Creek via a side bank discharge.

Outfall #002 is defined as the discharge of cleaning wastes to the City of Bellingham Post Point Pollution Control Facility, located at the western end of the site.

PERMIT STATUS

The previous permit for this facility was issued on December 22, 2000. The previous permit placed effluent limitations on settleable solids, total suspended solids, and total residual chlorine.

An application for permit renewal was submitted to the Department on November 22, 2004, and accepted by the Department on January 7, 2005.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received a compliance inspection on June 23, 2005.

During the history of the previous permit, the Permittee has remained in compliance based on discharge monitoring reports (DMRs) submitted to the Department and inspections conducted by the Department.

WASTEWATER CHARACTERIZATION

The wastewater discharge is characterized for the following regulated parameters, based on the past year's DMRs:

Table 1: Wastewater Characterization

| Outfall # | Parameter | Concentration Range |
|---|-------------------|---------------------|
| 001-Whatcom Creek | Settleable Solids | .00 |
| 001-Whatcom Creek | TSS | 0.2 – 2.8 mg/L |
| 002-Bellingham Wastewater Treatment Plant | BOD ₅ | 3.8 – 33.0 mg/L |

SEPA COMPLIANCE

This is an existing facility and SEPA compliance is not required.

POLLUTANTS OF CONCERN

Pollutants of concern in hatchery and rearing pond wastewater are the waste food and feces. The chemical constituents of concern in the waste food and feces are primarily nitrogen and phosphorus. The pollutant loading in the effluent is characterized with monthly total suspended solids (TSS) and weekly settleable solids (SS) monitoring.

The above-mentioned pollutants are present in the discharge from the raceways and rearing ponds at hatcheries in low concentrations, but in higher concentrations in the smaller volume discharges from the waste settling basins. The Department has determined that because of solids removal and wastewater discharge to the City of Bellingham Wastewater Treatment Plant, this facility poses a low risk of causing water quality violations.

The disease control chemicals used at these facilities are also considered by the Department to be pollutants of concern. These chemicals are used to treat both internal and external fish diseases and to prevent the spread of disease at or between facilities. The permit limits the use of these chemicals to only those approved for hatchery use and used in accordance with label instructions. The permit also prohibits the discharge of these chemicals in concentrations which would exceed federal or state water quality standards and requires that BMPs be used to minimize the concentration of these chemicals in the facilities' discharge. These chemicals include the following:

Internal Control

Amoxicillin
Terramycin (OTC)
Epsom Salts
Erythromycin
Romet 30
Florfenicol
Penicillin
Lincomycin
Albuterol
Clindamycin
Vibrio Vaccine

External Control

Acetic Acid
Buffered Iodophor
Chloramine-T
Formalin
Hydrogen Peroxide
Potassium Permanganate
Sodium Chloride (Salt)
Diquat
Citric Acid
Copper Sulfate

Disinfectants/Other

Chlorine
Iodophor
MS-222
Quaternary Ammonia
Sodium Thiosulfate
Aquashade
LLMO
Chlorhexidine
Lime Type-S
Carbon Dioxide (gas)
Ozone (gas)

Trimethoprim-sulfadiazine
Chlortetracycline
Tylosin
Fumagillin
Cephalexin
Benzocaine
Sulfamethoxazole (Albon)
GnRH=gonadotropin releasing hormone
Isoeugenol (Aqui-S)
Calcein
BKD Vaccine
Flavobacterium Columnare B Vaccine

All of these disease control chemicals are administered at known concentrations for their therapeutic or disease-prevention effect.

PROPOSED PERMIT LIMITATIONS AND CONDITIONS

Federal and State regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific wastewater. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the water quality standards (Chapter 173-201A WAC). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

BACKGROUND

In 1974, the EPA released a "Draft Development Document for Effluent Limitations Guidelines for Fish Hatcheries and Farms," for public review. In 1984, the EPA Region 10 contracted with JRB Associates for a study of Idaho trout facilities. The study recommended effluent limitations, which would represent best conventional pollutant control technology (BCT).

Individual NPDES permits for upland fin-fish hatching and rearing facilities issued in Washington before 1984 were based primarily on the EPA draft development document released in 1974. Permits issued after 1984 in Washington generally followed the effluent recommendations in the 1984 EPA/JRB Idaho fish hatchery study.

In 1990, the Department established AKART for these facilities through the adoption of standards for upland fin-fish facilities, Chapter 173-221A WAC, Wastewater Discharge Standards and Effluent Limitations.

The regulation was amended in October 1995. The most significant regulatory change was made to acknowledge the wide-spread and commonly accepted extra-label use of drugs and chemicals.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations have been established for this industry through the adoption of Chapter 173-221A WAC. This regulation contains both wastewater discharge standards and design criteria for wastewater treatment systems. This permit contains the same effluent limitations which have been adopted for this industry and placed in regulation (Chapter 173-221A WAC). Design criteria for wastewater treatment systems are not in the permit but are contained in the regulation covering this industry. Following are the wastewater discharge performance standards:

| <u>Rearing Pond Discharges</u> | <u>Limit</u> |
|---|--------------|
| Instantaneous Maximum Total Suspended Solids | 15 mg/L |
| Average Monthly Total Suspended Solids Concentration | 5 mg/L |
| Average Monthly Settleable Solids Concentration | 0.1 ml/L |
| <u>Offline Settling Basin and Rearing Pond Drawdown for Fish Release Discharges</u> | |
| Instantaneous Maximum Total Suspended Solids | 100 mg/L |
| Instantaneous Maximum Settleable Solids | 1.0 ml/L |

This permit also requires this facility to update and submit their Pollution Prevention Plan by January 1, 2006, and update the plan whenever necessary. This permit has added the requirements for a Solid Waste Management Plan. These plans must be submitted to the Department by January 1, 2006.

The implementation of the Pollution Prevention Plan and the Solid Waste Management Plan will provide further reductions in the amount of solids discharged, protect groundwater quality, prevent spills, and have procedures developed for responding to a spill.

WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established water quality standards. The Washington State water quality standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the waters of the state.

NUMERICAL CRITERIA

"Numerical" water quality criteria are numerical values set forth in the state of Washington's water quality standards (Chapter 173-201A WAC), which specify the allowable levels of pollutants in a receiving water. Numerical criteria for dissolved oxygen and turbidity are among the criteria contained in WAC 173-201A-030. Numerical criteria are also listed for many toxic substances including chlorine and ammonia (WAC 173-201A-040).

Numeric criteria set forth in the water quality standards are used to derive the effluent limits in a discharge permit. When water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) are used to limit acute and chronic toxicity, radioactivity, and other deleterious materials, and prohibit the impairment of the aesthetic value of the waters of the state. Narrative criteria describe the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDegradation POLICY

The state of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the Washington State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

TOXIC POLLUTANTS

Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the water quality standards or from having water quality-based effluent limits.

Some of the disease control chemicals used at these facilities are classified as toxic pollutants. The Department has determined that when these chemicals are used according to FDA requirements and label requirements, they pose no reasonable potential to violate federal or state water quality standards.

DISEASE CONTROL CHEMICALS

The disease control chemicals used at these facilities are administered for the internal and external control of fish diseases and also to disinfect facility tools, rearing ponds, or source waters to prevent the spread of these diseases. Numeric water quality standards have not been adopted for most of the compounds. The discharge concentration of these chemicals should not cause receiving water toxicity if the use is consistent with product labels, FDA regulations, and the permit requirement mandating Permittees to follow BMPs to dilute the treatment concentrations with other hatchery flows. The Department has determined that the use of BMPs will meet AKART for this pollutant.

The document entitled, "Approval of Disease Control Chemical Use Under the Department of Ecology's General Permit for Upland Fin-fish Hatching and Rearing Facilities" (1990) authorized the use of nonemergency and emergency extra-label drug and chemical use without the prior approval of the Department. In October 1995, Chapter 173-221A WAC was amended to specifically allow the extra-label use of disease control drugs and chemicals if the drugs and chemicals are administered by or under the supervision of a licensed veterinarian and approved in advance by the Department.

The previous permits adopted the document conditions and incorporated them into S4.B. The Department recognizes that there are many situations where extra-label disease control drug and chemical use could occur with little reasonable potential to impact water quality. The Department also recognizes that an epizootic disease outbreak may require extraordinary measures to save the fish. Epizootic disease outbreaks may require the extra-label use of a drug or chemical or the use of a drug or chemical that is not approved by the FDA or the EPA. In the previous permit, the Department required 24-hour prior notification for emergency drug and chemical use and a detailed account of quantity of disposed disease control drugs and chemicals, in the facility's operational log.

HUMAN HEALTH

The only pollutants known to have the potential to impact human health are the disease control chemicals. Because the fish are raised for eventual human consumption, the FDA also regulates the use of these chemicals. The permit allows the Permittees to use FDA-approved disease control chemicals only if they are used according to the product label. The permit also prohibits the discharge of these chemicals in concentrations which would exceed federal or state water quality standards and requires that BMPs be used to minimize the concentration of these chemicals in the facilities discharge.

GROUNDWATER QUALITY

The Department has promulgated groundwater quality standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. The Department has determined that a properly operated upland fin-fish hatching and rearing facility poses little potential to impact state groundwater standards. This permit does not authorize a violation of these standards. The Department will require facilities with the potential to violate these standards to obtain coverage under an individual permit and/or require rearing and pollution abatement ponds to be lined if necessary.

TEMPERATURE AND DISSOLVED OXYGEN

The pollutants of potential concern in the first version of this permit were temperature and dissolved oxygen. The concern was raised in a 1988 study by the Department on the "Quality and Fate of Fish Hatchery Effluents During the Summer Low Flow Season." These parameters were monitored at each facility during their first year of permit coverage. The results of this monitoring showed that these facilities do not have a reasonable potential to exceed these parameters. Based upon this information, the Department determined that further monitoring of temperature and dissolved oxygen was not warranted and eliminated the monitoring requirements from subsequent permits.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Whatcom Creek, which is designated as a Class A receiving water in the vicinity of the outfall. Characteristic uses include the following:

water supply (domestic, industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements for all or substantially all uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

| | |
|------------------|--|
| Fecal Coliforms | 100 organisms/100 mL maximum geometric mean |
| Dissolved Oxygen | 8 mg/L minimum |
| Temperature | 18 degrees Celsius maximum or incremental increases above background |
| pH | 6.5 to 8.5 standard units |
| Turbidity | less than 5 NTU above background |
| Toxics | No toxics in toxic amounts (See Appendix C for numeric criteria for toxics of concern for this discharge.) |

A Whatcom Creek TMDL is being prepared for fecal coliform bacteria. Studies show almost all of the bacteria source is stormwater derived. The discharge from the Bellingham Hatchery via Outfall #001 is not likely to contain fecal coliform bacteria. Characterization sampling may be conducted during this permit cycle. Fish are a cold-blooded species and do not produce fecal coliform bacteria. Fish food is not a known source of fecal contamination.

COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT

The proposed permit has the same effluent limits for rearing pond, raceway and hatchery flow-through water as the previous permit, issued December 22, 2000. Effluent limits from rearing pond or raceway drawdown for fish release discharges via Outfall #001, have been added as follows, to be consistent with the General Upland Hatchery Permit.

Rearing Pond or Raceway Drawdown for Fish Release Discharges, Outfall #001

| Parameter | Instantaneous Maximum |
|-------------------------------|-----------------------|
| Settleable Solids (ml/L) | 1.0 |
| Total Suspended Solids (mg/L) | 100 |

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

The previous permit allowed for the DPD colorimetric field test for chlorine as an acceptable alternative to constant bioassay. This permit requires residual chlorine be neutralized to less than 19 µg/L prior to discharge. This is the acute toxicity criterion promulgated in the Washington State Surface Water Quality Standards (Chapter 173-201A WAC). This permit contains the same requirements.

LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. The Washington Department of Fish and Wildlife laboratory in Olympia is accredited for Total Suspended Solids, Standard Methods #2540 D.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

NONROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for nonroutine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the wastewater to be placed through the facilities wastewater treatment process or require the water to be reused.

POLLUTION PREVENTION PLAN

The Department has determined that the Permittee can prevent or minimize the release of pollutants through the development and use of a Pollution Prevention Plan. The Permittee shall operate the facility in accordance with this plan along with any revisions directed by the Department to prevent an accidental release of pollutants under the authority of 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080. The Pollution Prevention Plan shall be reviewed each permit cycle and updated as necessary.

SOLID WASTE MANAGEMENT PLAN

The Department has determined that the Permittee can prevent groundwater contamination and minimize the release of pollutants through the development and use of a Solid Waste Management Plan. The plan shall address floating, suspended, and settled solids. The criteria for removing collected solids shall be addressed. The Permittee shall operate the facility in accordance with this plan along with any revisions directed by the Department to prevent pollution.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for surface waters, sediment quality standards, or water quality standards for ground waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for a term of five (5) years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.
1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.
1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.
1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.
1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Laws and Regulations (<http://www.ecy.wa.gov/laws-rules/index.html>)

Permit and Wastewater Related Information

(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on January 12 and January 19, 2005, in *The Bellingham Herald* to inform the public that an application had been submitted.

Public Notice of Draft (PNOD) was published on September 16, 2005, in *The Bellingham Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 4:30 p.m. weekdays, by appointment, at the regional office listed below.

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

No comments were received.

Further information may be obtained from the Department by telephone, 425-649-7201, or by writing to the address listed above.

This permit and fact sheet were written by Lori LeVander.

APPENDIX B--GLOSSARY

AKART--An acronym for "all known, available, and reasonable methods of treatment."

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Continuous Monitoring--Uninterrupted, unless otherwise noted in the permit.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/state permits issued under both state and federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Responsible Corporate Officer--A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface waterbody, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.